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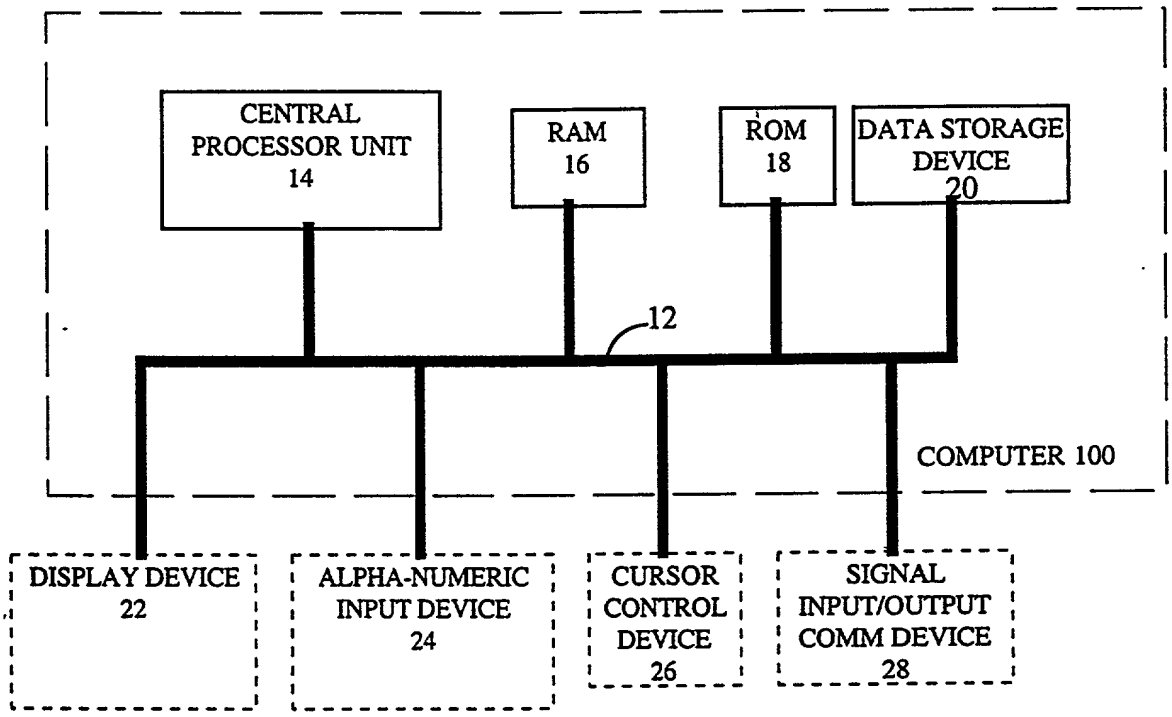

FIG. 1

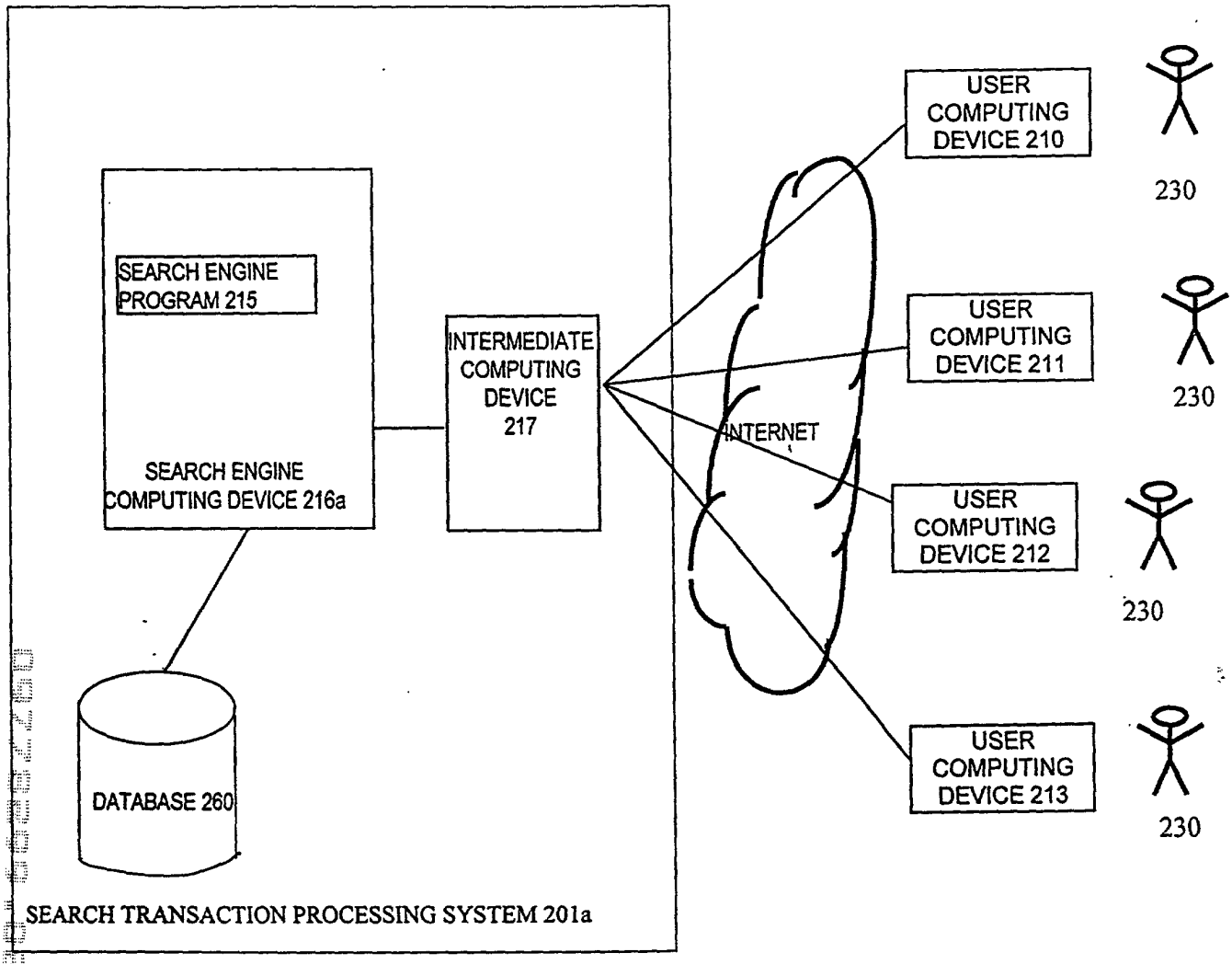
SEARCH ENGINE PROGRAM 215
SEARCH ENGINE COMPUTING DEVICE 216a
INTERMEDIATE COMPUTING DEVICE 217
INTERNET
USER COMPUTING DEVICE 210
USER COMPUTING DEVICE 211
USER COMPUTING DEVICE 212
USER COMPUTING DEVICE 213
230
230
230
230
DATABASE 260
SEARCH TRANSACTION PROCESSING SYSTEM 201a

Fig. 2

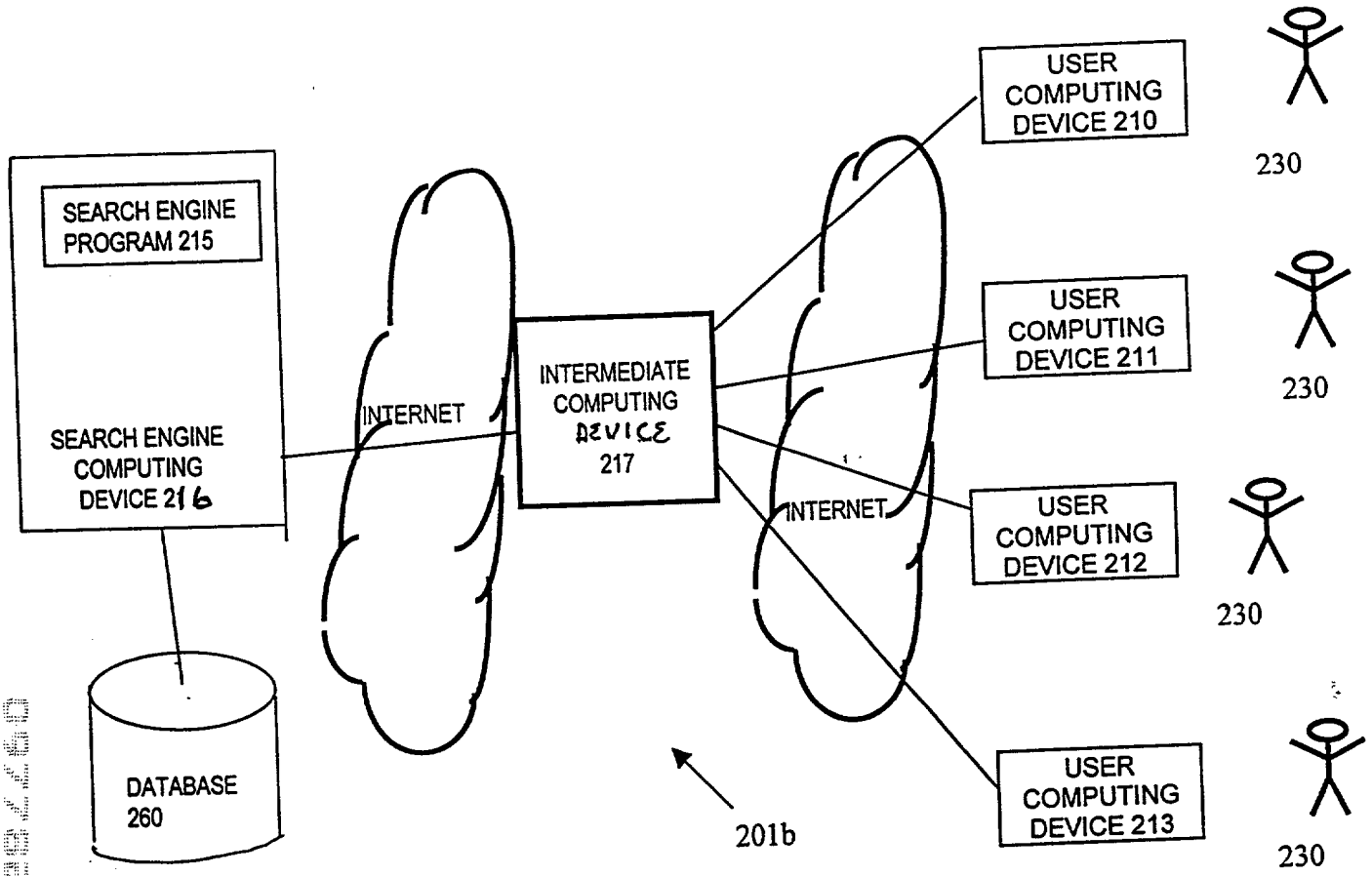
SEARCH ENGINE PROGRAM 215
SEARCH ENGINE COMPUTING DEVICE 216
DATABASE 260
INTERNET
INTERMEDIATE COMPUTING DEVICE 217
INTERNET
USER COMPUTING DEVICE 210
USER COMPUTING DEVICE 211
USER COMPUTING DEVICE 212
USER COMPUTING DEVICE 213
230
230
230
230
201b

Fig. 3

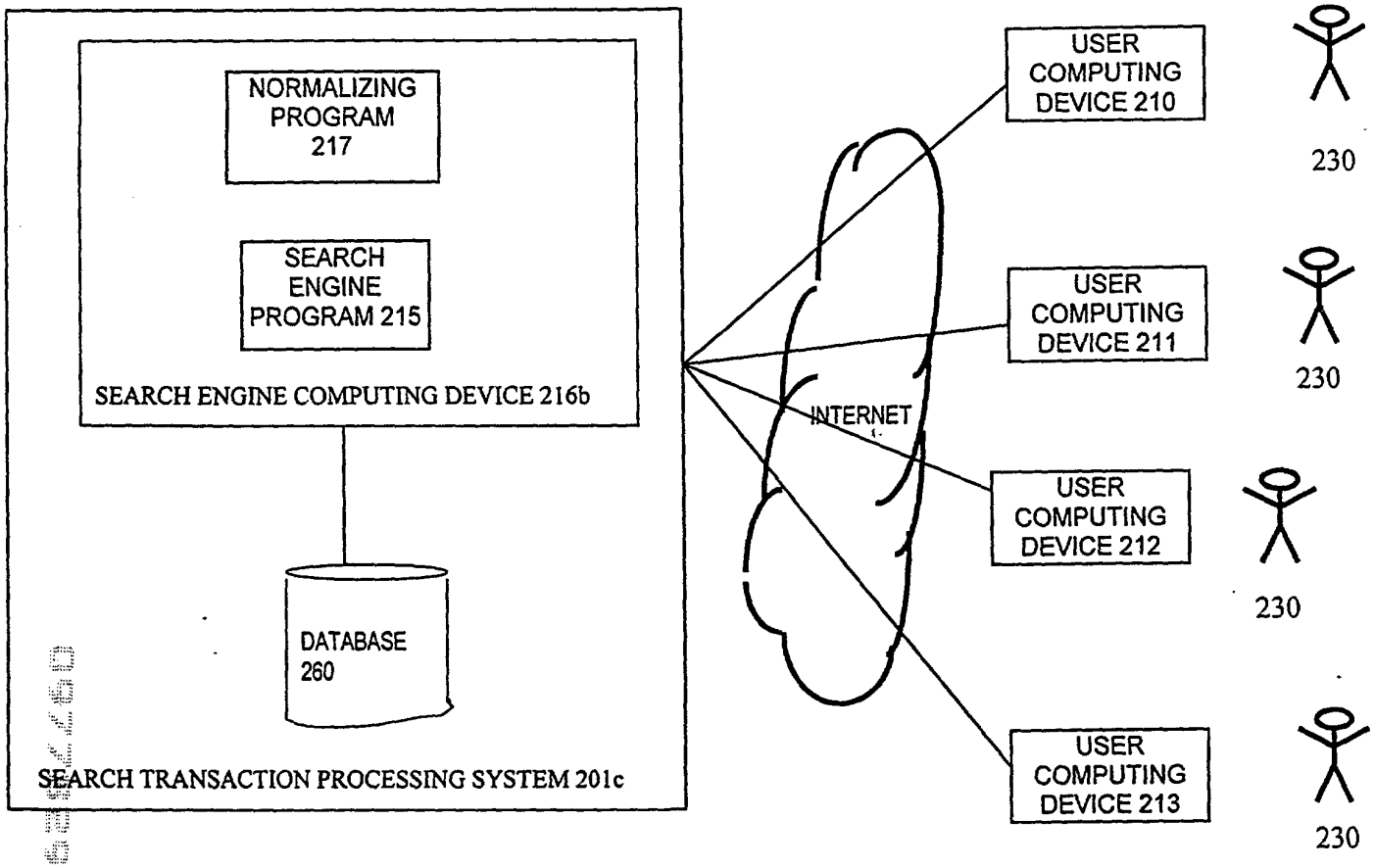
NORMALIZING PROGRAM 217
SEARCH ENGINE PROGRAM 215
SEARCH ENGINE COMPUTING DEVICE 216b
DATABASE 260
SEARCH TRANSACTION PROCESSING SYSTEM 201c
INTERNET
USER COMPUTING DEVICE 210
USER COMPUTING DEVICE 211
USER COMPUTING DEVICE 212
USER COMPUTING DEVICE 213
230
230
230
230

Fig. 4

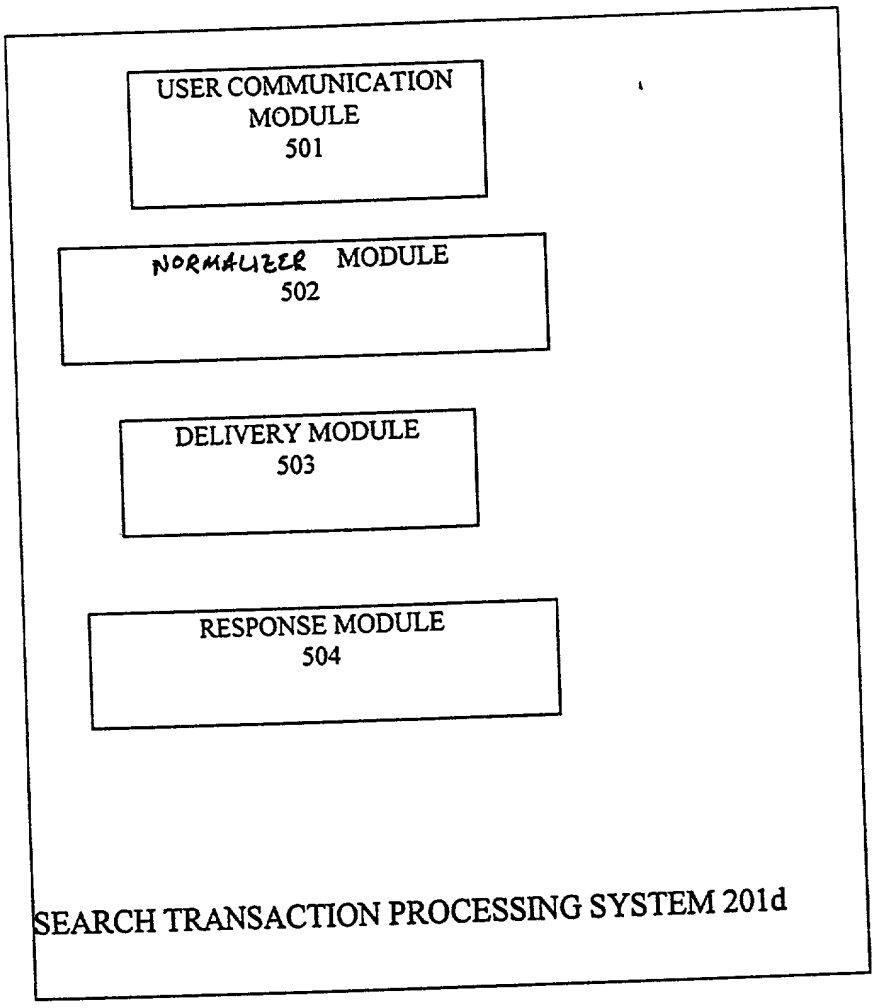
USER COMMUNICATION MODULE
501
NORMALIZER MODULE
502
DELIVERY MODULE
503
RESPONSE MODULE
504
SEARCH TRANSACTION PROCESSING SYSTEM 201d

FIG. 5

600

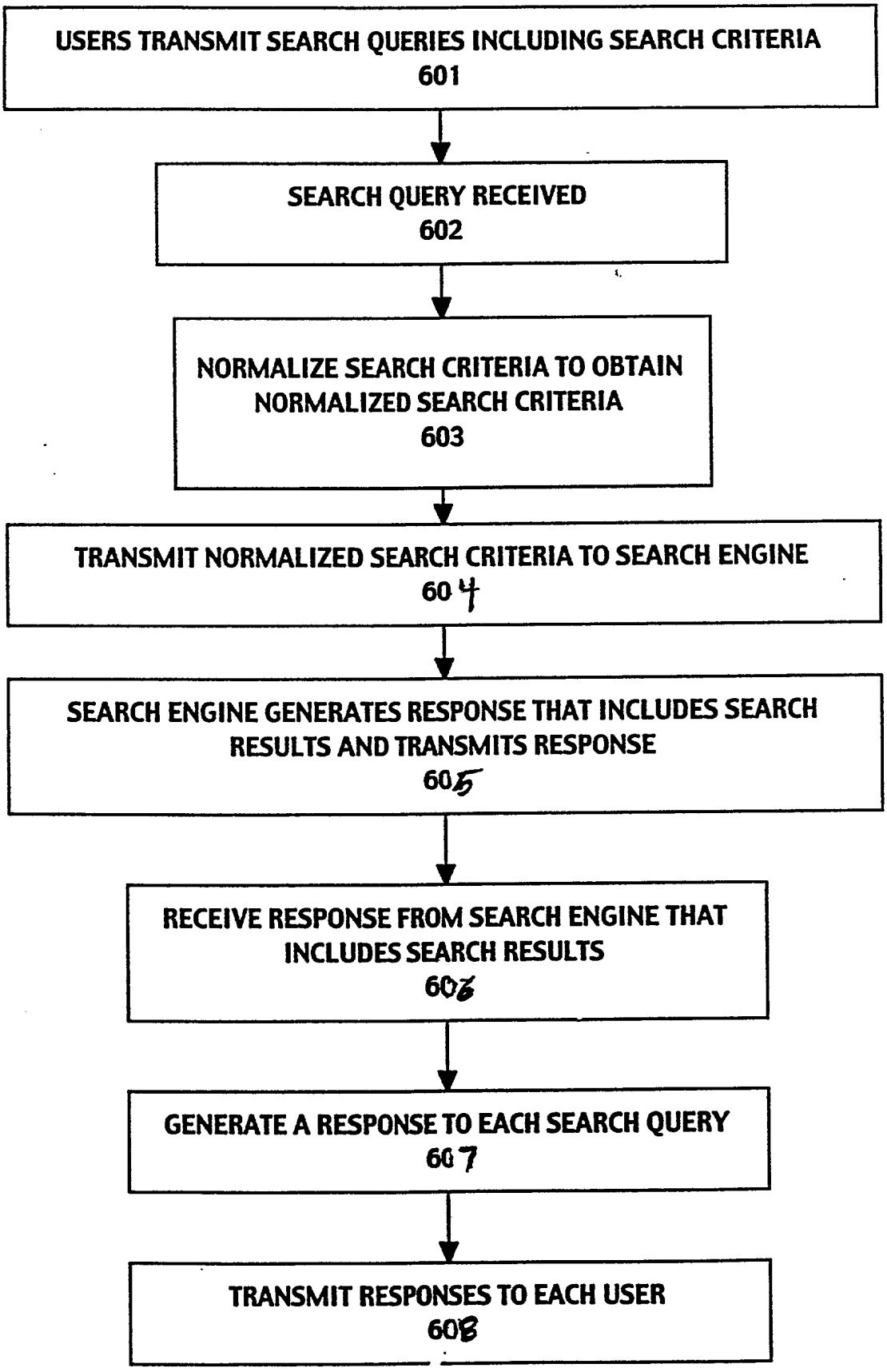
USERS TRANSMIT SEARCH QUERIES INCLUDING SEARCH CRITERIA
601
SEARCH QUERY RECEIVED
602
NORMALIZE SEARCH CRITERIA TO OBTAIN NORMALIZED SEARCH CRITERIA
603
TRANSMIT NORMALIZED SEARCH CRITERIA TO SEARCH ENGINE
604
SEARCH ENGINE GENERATES RESPONSE THAT INCLUDES SEARCH RESULTS AND TRANSMITS RESPONSE
605
RECEIVE RESPONSE FROM SEARCH ENGINE THAT INCLUDES SEARCH RESULTS
606
GENERATE A RESPONSE TO EACH SEARCH QUERY
607
TRANSMIT RESPONSES TO EACH USER
608

FIG. 6

700

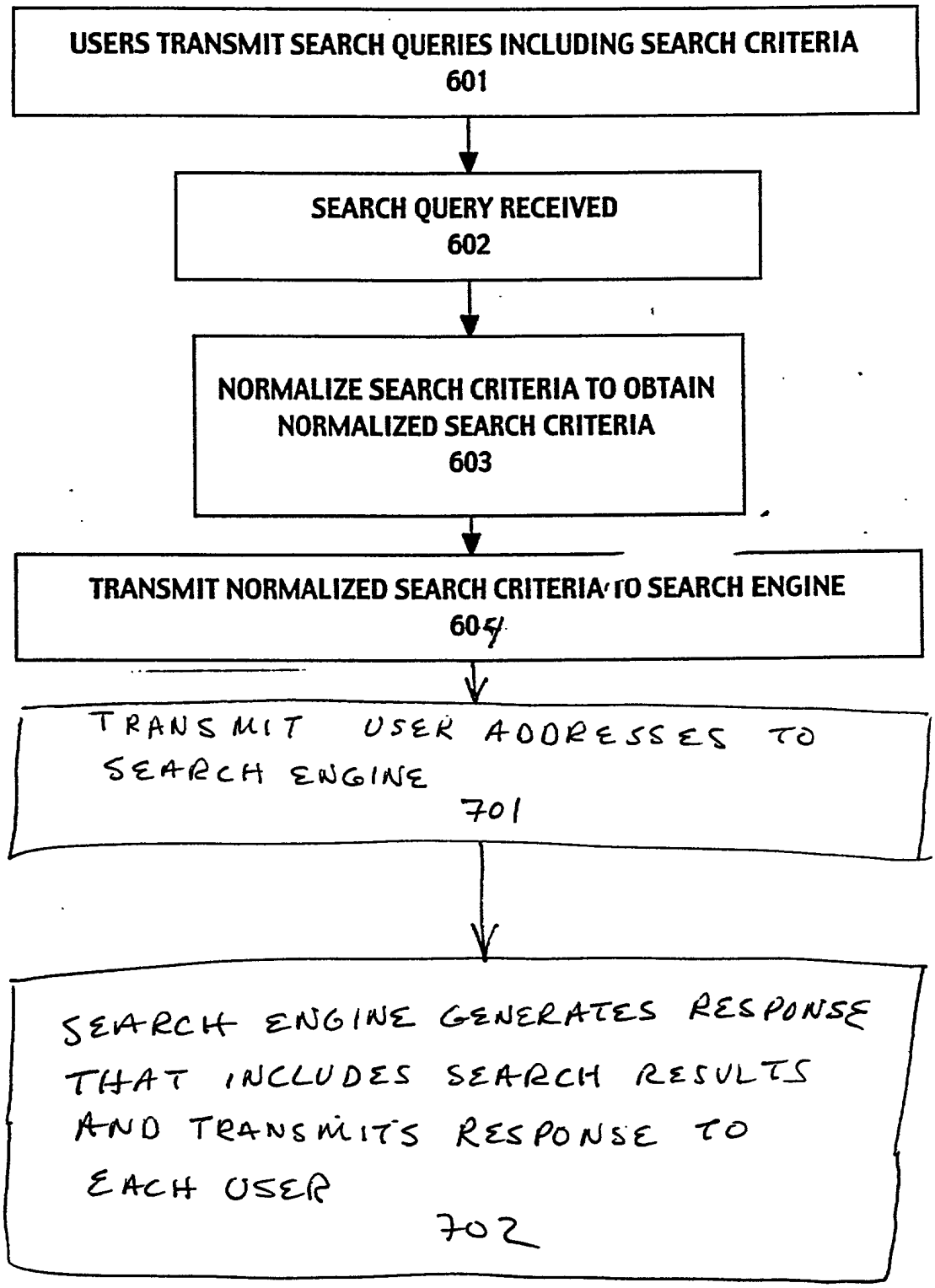
USERS TRANSMIT SEARCH QUERIES INCLUDING SEARCH CRITERIA
601
SEARCH QUERY RECEIVED
602
NORMALIZE SEARCH CRITERIA TO OBTAIN NORMALIZED SEARCH CRITERIA
603
TRANSMIT NORMALIZED SEARCH CRITERIA TO SEARCH ENGINE
604
TRANSMIT USER ADDRESSES TO SEARCH ENGINE
701
SEARCH ENGINE GENERATES RESPONSE THAT INCLUDES SEARCH RESULTS AND TRANSMITS RESPONSE TO EACH USER
702

FIG. 7

800

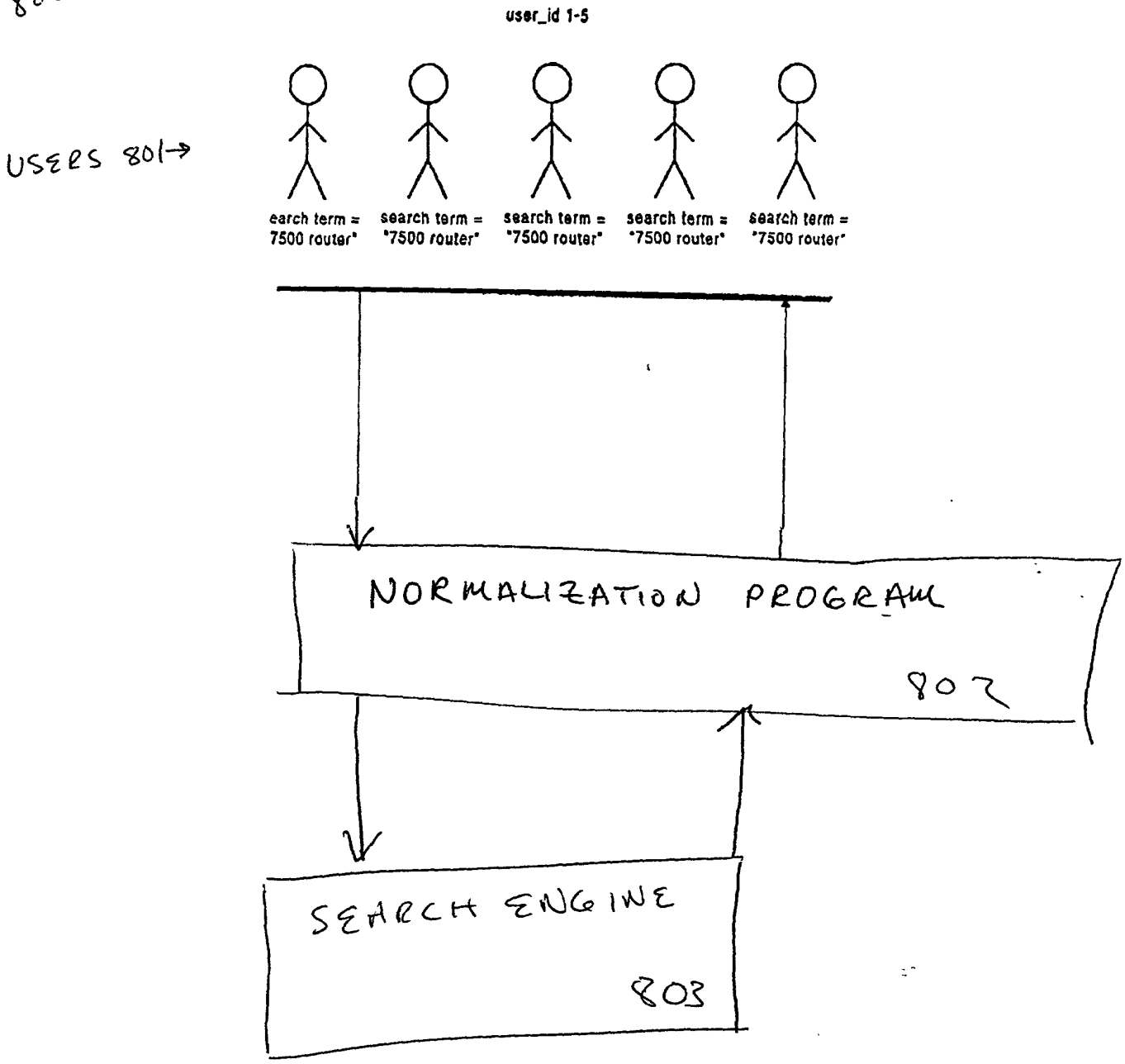
user_id 1-5
USERS 801→
earch term = 7500 router"
search term = "7500 router"
search term = "7500 router"
search term = "7500 router"
search term = "7500 router"
NORMALIZATION PROGRAM
802
SEARCH ENGINE
803

FIG. 8

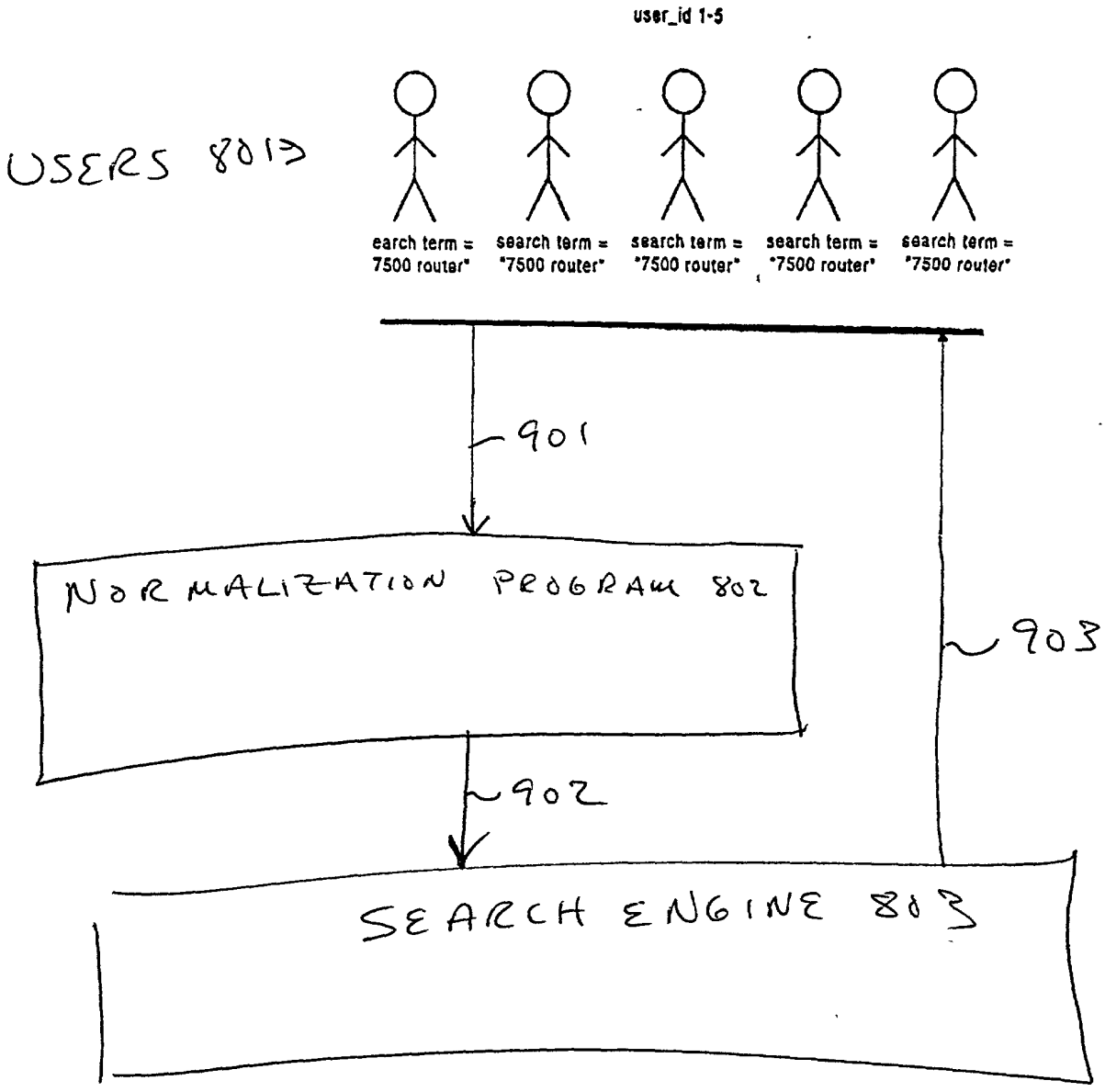
user_id 1-5
USERS 801
earch term = 7500 router"
search term = "7500 router"
search term = "7500 router"
search term = "7500 router"
search term = "7500 router"
901
NORMALIZATION PROGRAM 802
903
902
SEARCH ENGINE 803

FIG 9